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INTER-OFFICE CORRESPONDENCE

RICHMOND, VIRGINIA

To: . Distribution Date: August 28, 1980

From: . W. R. McCoy

Subject: . Revised Procedure for Handling 30-Gallon Metal Drums for Disposal of Solid Hazardous Waste Material.

A memo has previously been issued concerning the procedure for the handling of 30-gallon metal drums for the disposal of solid hazardous waste material generated or used by some members of the Biochemical Research Division.[1] A more recent memo reported an incident, and questions raised by that incident, involving this procedure.[2]

The two major issues, of which this memo is designed to resolve, are as follows. Mr. Barbee (Accounts Manager of Triangle Resource Industries - TRI) informed us that, due to the recent expansion of hazardous waste regulations by EPA under the authority of the Resource Conservation and Recovery Act (RCRA)[3], we have to put in writing what hazardous substances are in each drum along with an estimate of their concentrations. This information will have to be attached to each drum. The second issue, pointed out by Mr. Barbee, is that the contents of each drum, to which viable organisms are added, must be treated with formalin (37% formaldehyde in water) in order to satisfy the regulations of the disposal site (Solid Waste Management - Livingston, Alabama) utilized by TRI.

In order to comply with the above two requests, the procedure for handling 30-gallon metal drums for disposal of solid hazardous waste material is modified as follows. To each waste drum will be taped a plastic pocket (8½" x 12" size which is available from the PM mailroom) for holding PM Hazardous Waste Forms (available from W. McCoy). Attached to this memo is an example of the PM Hazardous Waste Form correctly filled out to comply with TRI and Federal regulations.

Before any materials are added to the drum, the inside of the drum must be lined with a large plastic bag (available from the R&D stockroom). Then, as materials are added to the drum, they must be noted on the PM Hazardous Waste Form along with the disposer's name, date, etc. (see attachment). Once the drum is filled, 500 ml of formalin (37% formaldehyde available from the R&D stockroom) is poured over the drum contents into the plastic drum liner. Since formalin itself is hazardous, this operation should be conducted with caution. (Gloves and lab coat should be worn, and drum should be in or adjacent to a fume hood). After the formalin has been added, the plastic bag is secured (this may be accomplished with a rubber band or string). The drum top, with sealing gasket in place, is then firmly attached. The PM Hazardous Waste Form is now completed by having both the project leader and the manager sign and date the form. Two copies of the completed Waste Form are placed in the plastic pocket taped to the drum. After the filled and formalin treated drum has remained in the laboratory for 24 hours, it is then transported to the Tower storage area. The plastic drum liner and formalin treatment procedure may be omitted for drums to which no viable organisms are added.

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Other minor changes have been made in the earlier procedure[1] for handling 30-gallon metal drums for disposal of solid hazardous waste material. You will find, attached, the revised protocol in step-by-step outline form with details of how the procedure is to now be followed.

References

1. McCoy, W. R., Procedure for Handling 30-Gallon Metal Drums for Disposal of Solid Hazardous Waste Material. Memo to distribution; 1979 Sept. 28.

2. McCoy, W. R. and McCuen, R., Additional Requirements for the Disposal of Hazardous Wastes. Memo to distribution; 1980 June 25.

3. Anonymous. Environmental Protection Agency, Hazardous Waste and Consolidated Permit Regulations. Federal Register. 45 (98):33063-33285. 1980 May 19. (40 CFR part 260).

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ATTACHMENT 1

Revised Procedure for Handling 30-Gallon Metal Drums for Disposal of Solid Hazardous Waste Material

The revised protocol is as follows:

1. TRI will provide PM with 30-gallon drums to which vermiculite has been added to a depth of 3-4 inches. Also provided are top-sealing gaskets and nuts and bolts for securing tops to the drums. The R & D stockroom (Mr. Mark Davis or his designee) will provide plastic bags for the lining of drums.

2. Empty drums, along with accessories described above, will be transferred from the stockroom area to the Tower storage area (outside storage on the north side of the Tower) by stockroom personnel. These materials will be stored in the Tower storage area for exclusive use by the members of Charge Numbers 6906 and 6908.

3. A short ramp constructed of heavy gauge aluminum has been provided so that a cart can be moved in and out of the storage area. A laboratory cart, which will be used to transport the empty as well as the full drums, has been provided to 6906 and 6908 personnel. This cart is normally kept in the T-6 north chase when not in use.

4. The door leading into the designated storage area will be padlocked. Keys to this lock will be retained by Mr. Davis, Mr. W. R. McCoy (who has been designated as having primary responsibility for coordination of toxic waste disposal operations in the Biochemical Research Division), and Mrs. Nancy Peters, Biochemical Research Division Secretary.

5. Members of Charge Numbers 6906 and 6908 will be responsible for the transportation of drums between their respective laboratories and the Tower storage area (for further details, see #9 below).

6. Once an empty drum is placed in the laboratory, it may remain there until it is filled. However, as each drum is put into use, it will be marked "Caution Cancer Suspect Agent" and/or "Cancer Suspect Agent: Authorized Personnel Only." These self-adhesive, 6 x 11.5 cm labels are available from Mr. McCoy (T-712). Also, to each drum will be taped a plastic pocket (8½" x 12" size which is available from the PM mailroom) for holding the PM Hazardous Waste Forms (available from W. McCoy).

Attached to this memo is an example of the PM Hazardous Waste Form correctly filled out according to TRI and

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Federal regulations. Before any materials are added to the drum, the inside of the drum must be lined with a large plastic bag (available from the R & D stockroom). Then, as materials are added to the drum, they must be noted on the PM Hazardous Waste Form along with the disposer's name, date, etc. (see attachment). Drums should be filled with solid waste only (petri dishes, pipettes, test tubes, etc.). Liquid waste should not be placed in these drums. A revised procedure for the handling of liquid hazardous waste material is in preparation.

7. Once the drum is filled, 500 ml of formalin (37% formaldehyde, available from the R & D stockroom) is poured over the drum contents into the plastic drum liner. (This formalin treatment procedure may be omitted for drums to which no viable organisms are added). Since formalin itself is hazardous, this operation should be conducted with caution. (Gloves and lab coat should be worn, and drum should be in or adjacent to a fume hood). After the formalin has been added, the plastic bag (liner) is secured (this may be accomplished with a rubber band or string).

8. The drum top, with sealing gasket in place, is firmly secured. (The 6906/6908 personnel responsible for filling the drum are also responsible for sealing it.) Care should be taken to place the fastening bracket with nut and bolt in the "down" position (i.e, below the top surface of the drum). Tools to assist in the performance of this operation are located in room T-712 (or see Mr. McCoy).

9. The PM Hazardous Waste Form is now completed by having both the project leader and the manager sign and date the form. Two copies of the completed Waste Form are placed in the plastic pocket taped to the drum.

10. After the formalin treated drum has remained in the laboratory for 24 hours, it is then transported to the Tower storage area.

    Members of Charge Numbers 6906 and 6908 will be responsible for the transportation of these full drums between their respective laboratories and the Tower storage area. The drum will be strapped to the laboratory cart (see paragraph 3 above) and transported by two people to the storage area. Transportation of drums on the Tower freight elevator will be accomplished with the drum movers having sole control of the elevator. This is done through the use of an elevator key, which will be retained by Mrs. Nancy Peters.

11. Upon exit through the Tower receiving door to the drum storage area, the receiving door must be closed. This is accomplished by arranging for mail room personnel to close the door after exit. To reenter the building, a signal

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bell, located adjacent to the outside of the receiving door, is pressed. Mail room personnel will then reopen the door.

12. The PM Hazardous Waste Form must remain attached to the metal drum via the plastic pocket to aid Mark Davis and TRI personnel in loading the drums for interstate shipment and burial in Alabama.

13. Mr. Davis, only, will inform TRI to arrange their schedule for a pickup of the full drums and/or the delivery of empty drums as necessary.

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ATTACHMENT 2

PM HAZARDOUS WASTE FORM

Item	Chemical Name of Waste*	Amount Discarded (Weight and/or Volume)	Generator and Date
Lab coat		One	S. Drew
Gloves		One pair	S. Drew
Lab coat		One	W. McCoy
Gloves		One pair	W. McCoy
Test tubes containing the following:	Dimethyl sulfoxide	< 1 µg	S. Drew
	Nicotine and nicotine salts	< 1 µg	"
	2-aminoanthracene	< 1 µg	"
	2-nitrofluorene	< 1 µg	"
	Sodium azide	< 1 µg	"
Petri Plates containing the following	Nicotine and nicotine salts	200 mg	W. McCoy
	Dimethyl sulfoxide	100 ml	"
	2-aminoanthracene	2 µg	"
	2-nitrofluorene	13 µg	"
	Sodium azide	3 µg	"
	Formalin (37% formaldehyde)	500 ml	"

* No abbreviations; list complete name of all chemicals

GENERATED BY
Building/Room Number - Tower/712
Responsible Person - (Project Leader)
Date -

I certify that the above named materials are properly classified and described according to applicable regulations of the DOT.

(Manager)
name and title - typed

Date

Signature

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